2.1.5 Boiler Nameplate Data

Boiler	
Manufacturer	Nebraska Boiler.
Serial Number	Boiler #1 - D-3301 Boiler #2 - D-3302 Boiler #3 - D-3300 Boiler #4 - D-3303 Boiler #5 - D-3304
Model Number	Boilers 1, 2, 4, and 5 - NS•C/S• 46 Boiler 3 - SC/S• 43
Capacity	40,000 lb/hr
Heating Surface	Boilers 1, 2, 4, and 5 - 3,066 ft^2 Boiler 3 - 2,871 ft^2
Design Pressure	250 psig
Design Temperature	406.3° F (saturation temp)
Operating Pressure	100 psig
Operating Temp	337.89° f (saturation temp)
Boiler Height	13'-4"
Boiler Width	11'-1"
Boiler Length	16'-8”
ASME Code	Boiler and Pressure Vessel Code Section I - S Stamp 1992 Code, 1992 Addenda

FORM P-3 MANUFACTURER'S DATA REPORT FOR WATERTUBE BOILERS, SUPERHEATERS, WATERWALLS, AND ECONOMIZERS

As Required by the Provisions of the ASME Code Rules, Section I

MASTER DATA REPORT (check one) YES ☐ NO ☑

Manufactured by National Dynamics Corp., 6940 Cornhusker Highway, Lincoln, Nebraska 68507
(Name and address of manufacturer)

Manufactured for American Combustion, Inc., Brentwood, MD
(Name and address of purchaser)

Location of installation NASA-Goddard Space Flight Center, Greenbelt, MD
(Name and address)

Unit Identification: Watertube Boiler (Complete boiler, superheater, waterwall, economizer, etc.) ID Nos. D-3301 Boiler 1 (Mfr's Serial No) (CRN) 94D5603A (Drawing No.) 3181 (Nat'l Bd. No.) 1995 (Year Built)

The chemical and physical properties of all parts meet the requirements of material specifications of the ASME BOILER AND PRESSURE VESSEL CODE. The design, construction and wrokmanship conform to Section I of the ASME Boiler and Pressure Vessel Code. 1992 (Year) Addenda to 1993 (Date) and Code Cases _____ (Numbers)

Supporting Manufacturer's Data Reports properly identified and signed by Commissioned Inspectors are attached for the following items of this report:

* Steam Drum Shell, 6(a)1, LaBarge Pipe and Steel Company (S) K655-01-2
(Name of part, item number, mfr's name, and identifying stamp)

* Water Drum Shell, 6(a)2, LaBarge Pipe and Steel Company (S) K639-01-13 (S) K639-01-14

- Indicates N/A

3. (a) Drums:

No.	Inside Diameter, in.	Inside Length ft.	Inside Length in.	Shell Plates: Mat'l. Spec. No., Grade	Shell Plates: Thickness, in.	Shell Plates: Inside Radius, in.	Tubesheets: Thickness in.	Tubesheets: Inside Radius, in.	Tube Hole Ligament Efficiency, %: Longitudinal	Tube Hole Ligament Efficiency, %: Circumferential
1	*		*	*	*	*	-	-	.318	.294
2	*		*	*	*	*	-	-	.318	.258
	36	1	0	SA516 GR 70	.9375	18	-	-	.592	.296

No.	Longitudinal Joints: No. & Type*	Longitudinal Joints: Efficiency	Circum. Joints: No. & Type	Circum. Joints: Efficiency	Heads: Mat'l. Spec. No., Grade	Heads: Thickness, in.		Heads: Type**	Heads: Radius of Dish	Heads: Manholes No. Size	Hydrostatic Test, psi.
1	*	*	(2)-(2)	100%	SA516-70	.625	.5625	(3)	32.6	(2)12"x16"	-
2	*	*	(3)-(2)	100%	SA516-70	.625	.5625	(3)	21.7	(2)12"x16"	-
3	1-2	100%	(1)-(2)	100%	-	-	-	-	-	-	-

*Indicate if (1) Seamless; (2) Fusion welded.

**Indicate if (1) Flat; (2) Dished; (3) Ellipsoidal; (4) Hemispherical

3. (b) Boiler tubes:

Diameter	Thickness	Mat'l. Spec. No., Grade
2"O.D.	.134	SA178 GR A
2"O.D.	.135	SA178 GR A
-	-	-
-	-	-
-	-	-

6. (c) Headers no. - (Box or sinuous or round, Mat'l. spec. no.; Thickness)

Heads or Ends - Hydro. Test, psi - (Shape; Mat'l. spec no. Thickness)

6. (d) Staybolts - (Mat'l .spec. no.; Diameter; Size telltale; Net area)

Pitch - in. Net Area - in.^{2} MAWP - psi (Hor. and Vert.) (Supported by one bolt)

3. (e) Mud Drum: - or - Heads or Ends - Hydro. Test, psi - (For sect. header boilers, State Size; Shape; Mat'l. spec. no.; Thickness) (Shape; Mat'l. spec. no.; Thickness)

7. (a) Waterwall Headers:

No.	Size and Shape	Material Spec No.	Thickness, in.	Heads or Ends: Shape	Heads or Ends: Thickness, in.	Heads or Ends: Mateial Spec. No.	Hydro Test, psi.	7(b) Waterwall Tubes: Diameter, in.	7(b) Waterwall Tubes: Thickness, in.	7(b) Waterwall Tubes: Material Spec. No.
-	-	-	-	-	-	-	-	-	-	-
	-	-	-	-	-	-	-	-	-	-
	-	-	-	-	-	-	-	-	-	-

8. (a) Economizer Headers

								8(b) Economizer Tubes		
-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-

FORM P-3 (Back)

9. (a) Superheater Headers — Heads or Ends — 9 (b) Superheater Tubes

	Size and Shape	Material Spec No.	Thickness, in.	Shape	Thickness, in.	Mateial Spec. No.	Hydro Test, psi.	Diameter, in.	Thickness, in.	Material Spec. No.
	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-

10.(a) Other Parts (1) Manway Rings SD & WD (2) - (3) - 10(b) Tubes for Other Parts

1	12"x16"Ellipse	SA516-70	1.0	-	-	-	-	-	-	-
2	-	-	-	-	-	-	-	-	-	-
3	No Connections to Item 11 Except as Listed			-	-	-	-	-	-	-

11. Openings (1) Steam (1)-6"-300#R.F.W.N.Flg.SA105 (No., size, and type of nozzles or outlets) (2) Safety Valve (2)-2 1/2"-300#R.F.S.O.Flg.SA105 (No., size, and type of nozzles or outlets)

(3) Blowoff (1)-1 1/2"-300#R.F.S.O.Flg.SA105 (No., size, and type of nozzles or outlets) (4) Feed (1)-2"NPT Taptube SA210C Burner End Steam Drum (No., size, type and location of connections)

12.

		Maximum Allowable Working Pressure	Code Par. and/or Formula on Which MAWP is Based	Shop Hydro. Test, psi	Heating Surface Sq. Ft.
a	Boiler	250	PG 27 & 29	375	2,871
b	Waterwall	-	-	-	-
c	Economizer	-	-	-	-
d	Superheater	-	-	-	-
e	Other Parts	250	PG 44	-	-

Heating surface to be stamped on drum heads. This heating surface not to be used for determining minimum safety valve capacity.

13. Field Hydro. Test psi

14: Maximum Designed Steaming Capacity 40,000 lb/hr

15. Remarks: All threaded Piping to be Sch. 80 SA106 GR B

CERTIFICATE OF SHOP COMPLIANCE

We certify that the statements made in this data report are correct and that all details of design, material, construction, and workmanship of this boiler conform to Section I of the ASME BOILER AND PRESSURE VESSEL CODE.

Certificate of Authorization No. 1,769 to use the (S) S Symbol expires March 30 , 19 98

11-6-95 Signed Bob Kirkpatrick (Authorized Representative) Name National Dynamics Corp. (Manufacturer)

CERTIFICATE OF SHOP INSPECTION

BOILER MADE BY National Dynamics Corp. at 6940 Cornhusker Highway, Lincoln, Nebraska

I, the undersigned, holding a valid commission issued by The National Board of Boiler and Pressure Vessel Inspectors and the state or province of Nebraska and employed by H.S.B.I.&I. Co. of Hartford, CT have inspected parts of this boiler referred to as data items 6(a), 6(b), 10(a), 11, 12(a), 12(e), 14 and have examined Supporting Manufacturer's Data Reports for items 6(a)1, 6(a)2 and state that, to the best of my knowledge and belief, the Manufacturer has constructed this boiler in accordance with Section I of the ASME BOILER AND PRESSURE VESSEL CODE. By signing this certificate neither the Inspector nor his employer makes any warranty, expressed or implied, concerning the boiler described in this Manufacturer's Data Report. Furthermore, neither the Inspector nor his employer shall be liable in any manner for any personal injury or property damage or a loss of any kind arising from or connected with this inspection.

Date 11-6-95 Signed Frank Hamtak (Authorized Inspector) Commissions NAT'L BD 11474A Nebraska (Nat'l Bd. (incl. endorsements) State, Prov. and No.)

CERTIFICATE OF FIELD ASSEMBLY COMPLIANCE

We certify that the field assembly of all parts of this boiler conforms with the requirements of SECTION I of the ASME BOILER AND PRESSURE VESSEL CODE.

Our Certificate of Authorization No. _____ to use the (A) (S) _____ Symbol expires _____ , 19 _____

Date _____ Signed _____ (Authorized Representative) Name _____ (Assembler)

CERTIFICATE OF FIELD ASSEMBLY INSPECTION

I, the undersigned, holding a valid commission issued by The National Board of Boiler and Pressure Vessel Inspectors and the state or province of _____ and employed by _____ have compared statements in this Manufacturer's Data Report with the described boiler and state that the parts referred to as data items _____ , not included in the Certificate of Shop Inspection, have been inspected by me and that to the best of my knowledge and belief, the manufacturer and/or the assembler has constructed and assembled this boiler in accordance with the applicable sections of the ASME BOILER AND PRESSURE VESSEL CODE. The described boiler was inspected and subjected to a hydrostatic test of _____ psi.

signing this certificate neither the inspector nor his employer makes any warranty, expressed or implied, concerning the boiler described in this Manufacturer's ta Report. Furthermore, neither the inspector nor his employer shall be liable in any manner for any personal injury or property damage or a loss of any kind arising from or connected with this inspection.

Date _____ Signed _____ (Authorized Inspector) Commissions _____ (Nat'l Bd. (incl. endorsements) State, Prov. and No.)

FORM P-4 MANUFACTURER'S PARTIAL DATA REPORT
As Required by the Provisions of the ASME Code Rules, Section I

factured by LaBarge Pipe & Steel Company 1300 N. LaBarge Ave. Wagoner, OK 74467 P-4 ID No. -

(Name and address of manufacturer)

2. Manufactured for National Dynamics Corp. 6940 Cornhusker Hwy. Lincoln, NE 68507

(Name and address of purchaser)

3. Identification of Part(s)

Name of Part	Quantity	Line No.	Mfr's Identifying Numbers	Manufacturer's Drawing No.	CRN	National Board No.	Year Built
DRUM	1	01	K639-01- 13	K639			1994

4. The chemical and physical properties of all parts meet the requirements of material specifications of the ASME BOILER AND PRESSURE VESSEL CODE. The construction and workmanship conform to ASME Rules, Section I of ASME Boiler and Pressure Vessel Code.

1992 (Year) Addenda to 1993 (Date), and Code Cases N/A (Numbers)

6. (a) Drums:

No.	Inside Diameter, in.	Inside Length ft.	Inside Length in.	Shell Plates: Mat'l. Spec. No., Grade	Shell Plates: Thickness, in.	Shell Plates: Inside Radius, in.	Tubesheets: Thickness in.	Tubesheets: Inside Radius, in.	Tube Hole Ligament Efficiency, %: Longitudinal	Tube Hole Ligament Efficiency, %: Circumferential
1	22-3/4	10'	0"	SA 516 GR 70	.625	11-3/8				
2										
3										
4										

No.	Longitudinal Joints: No. & Type*	Longitudinal Joints: Effi-ciency	Circum. Joints: No. & Type	Circum. Joints: Effi-ciency	Heads: Mat'l. Spec. No., Grade	Heads: Thickness, in.	Heads: Type**	Heads: Radius of Dish	Heads: Manholes No. Size	Hydro-static Test, psi.
1	1(2)	100	N/A	N/A						
2										
3										
4										

*Indicate if (1) Seamless; (2) Fusion welded.

**Indicate if (1) Flat; (2) Dished; (3) Ellipsoidal; (4) Hemispherical

6. (b) Boiler tubes:

Diameter	Thickness	Mat'l. Spec. No., Grade

6. (c) Headers no. _____

(Box or sinuous or round, Mat'l. spec. no.; Thickness)

Heads or Ends _____ Hydro. Test, psi _____

(Shape; Mat'l. spec no. Thickness)

6 (d) Staybolts _____

(Mat'l .spec. no.; Diameter; Size telltale; Net area)

Pitch _____ In.Net Area _____ in.^{2} MAWP _____ psi

(Hor. and Vert.) (Supported by one bolt)

6. (e) Mud Drum: _____ Heads or Ends _____ Hydro. Test, psi _____

(for sect. header boilers, State size; Shape; Mat'l. spec. no.; Thickness) (Shape; Mat'l. spec. no.; Thickness)

7. (a) Waterwall Headers:

No.	Size and Shape	Material Spec No.	Thickness, in.	Heads or Ends: Shape	Heads or Ends: Thickness, in.	Heads or Ends: Material Spec. No.	7(b) Waterwall Tubes: Hydro Test, psi.	Diameter, in.	Thickness, in.	Material Spec. No.

This form may be obtained from The National Board of Boiler and Pressure Vessel Inspectors, 1055 Crupper Ave., Columbus., OH 43229

FORM P-4 (Back)

(a) Economizer Headers				Heads or Ends			8b) Economizer Tubes			
No	Size and Shape	Material Spec No.	Thickness, in.	Shape	Thickness, in.	Material Spec. No.	Hydro Test, psi.	Diameter, in.	Thickness, in.	Material Spec. No.

(a) Superheater Headers							9(b) Superheater Tubes			

(a) Other Parts (1) _____ (2) _____ (3) _____ 10(b) Tubes for Other Parts

1										
2										
3										

Openings (1) Steam _____ (2) Safety Valve _____
(No., size, and type of nozzles or outlets) (No., size, and type of nozzles or outlets)

(3) Blowoff _____ (4) Feed _____
(No., size, and type of nozzles or outlets) (No., size, type and location of connections)

		Maximum Allowable Working Pressure	Code Par. and/or Formula on Which MAWP is Based	Shop Hydro. Test, psi	Heating Surface Sq. Ft.
a	Boiler				
b	Waterwall				
c	Economizer				
d	Superheater				
e	Other Parts	250 psi	PG 27.2.2		

Heating surface to be stamped on drum heads
This heating surface not to be used for determining minimum safety valve capacity

13. Field Hydro. Test psi

ks: FOR INFORMATION ONLY:

The weld procedure used on this item has also been qualified in a post weld heat treated condition.

Certified to material & workmanship only.
.563 min. wall

CERTIFICATE OF SHOP COMPLIANCE

We certify the statements made in this Manufacturer's Partial Data Report to be correct and that all details of material, construction, and workmanship of this boiler part conform to Section I of the ASME BOILER AND PRESSURE VESSEL CODE.

Certificate of Authorization No. 14,120 to use the (PP) or (S) S Symbol expires July 19, 19 95

Date 12-20-94 Signed Robert J. Betts Name LaBarge Pipe & Steel Company
(Authorized Representative) (Manufacturer)

CERTIFICATE OF SHOP INSPECTION

I, the undersigned, holding a valid commission issued by The National Board of Boiler and Pressure Vessel Inspectors and the state or province of OK and employed by Delta Lloyds Insurance Company Houston, Tx. have inspected the part of a boiler described in this Manufacturer's Partial Data Report on 12-20 19 94, and state that to the best of my knowledge and belief, the manufacturer has constructed this part in accordance with the applicable sections of the ASME BOILER AND PRESSURE VESSEL CODE.

By signing this certificate neither the inspector nor his employer makes any warranty, expressed or implied, concerning the part described in this Manufacturer's Partial Data Report. Furthermore, neither the inspector nor his employer shall be liable in any manner for any personal injury or property damage or a loss of any kind arising from or connected with this inspection.

12-20-94

Signed Dan Wagester Commissions OK # 684
(Authorized Inspector) (Nat'l Board (incl. endorsements) State, Province, and No.)

FORM P-4 MANUFACTURER'S PARTIAL DATA REPORT
As Required by the Provisions of the ASME Code Rules, Section I

1. actured by LaBarge Pipe & Steel Company 1300 N. LaBarge Ave. Wagoner, OK 74467 P-4 ID No. -
(Name and address of manufacturer)

2. Manufactured for National Dynamics Corp. 6940 Cornhusker Hwy. Lincoln, NE 68507
(Name and address of purchaser)

3. Identification of Part(s)

Name of Part	Quantity	Line No.	Mfr's Identifying Numbers	Manufacturer's Drawing No.	CRN	National Board No.	Year Built
DRUM	1	01	K639-01-14	K639			1994

4. The chemical and physical properties of all parts meet the requirements of material specifications of the ASME BOILER AND PRESSURE VESSEL CODE. The construction and workmanship conform to ASME Rules, Section I of ASME Boiler and Pressure Vessel Code.

1992 (Year) Addenda to 1993 (Date), and Code Cases N/A (Numbers).

6. (a) Drums:

No.	Inside Diameter, in.	Inside Length ft. in.	Shell Plates: Mat'l. Spec. No., Grade	Shell Plates: Thickness, in.	Shell Plates: Inside Radius, in.	Tubesheets: Thickness in.	Tubesheets: Inside Radius, in.	Tube Hole Ligament Efficiency, %: Longitudinal	Tube Hole Ligament Efficiency, %: Circumferential
1	22-3/4	10' 0"	SA 516 GR 70	.625	11-3/8				
2									
3									
4									

No.	Longitudinal Joints: No. & Type*	Longitudinal Joints: Efficiency	Circum. Joints: No. & Type	Circum. Joints: Efficiency	Heads: Mat'l. Spec. No., Grade	Heads: Thickness, in.	Heads: Type**	Heads: Radius of Dish	Heads: Manholes No. Size	Hydrostatic Test, psi.
1	1(2)	100	N/A	N/A						
2										
3										
4										

*Indicate if (1) Seamless; (2) Fusion welded.

**Indicate if (1) Flat; (2) Dished; (3) Ellipsoidal; (4) Hemispherical

6. (b) Boiler tubes:

Diameter	Thickness	Mat'l. Spec. No., Grade

6. (c) Headers no. _____
(Box or sinuous or round, Mat'l. spec. no.; Thickness)

Heads or Ends _____ Hydro. Test, psi _____
(Shape; Mat'l. spec no. Thickness)

6 (d) Staybolts _____
(Mat'l .spec. no.; Diameter; Size telltale; Net area)

Pitch _____ In.Net Area _____ in.^{2} MAWP _____ psi
(Hor. and Vert.) (Supported by one bolt)

6. (e) Mud Drum: _____ Heads or Ends _____ Hydro. Test, psi _____
(for sect. header boilers, State size; Shape; Mat'l. spec. no.; Thickness) (Shape; Mat'l. spec. no.; Thickness)

7. (a) Waterwall Headers:

No.	Size and Shape	Material Spec No.	Thickness, in.	Heads or Ends: Shape	Heads or Ends: Thickness, in.	Heads or Ends: Material Spec. No.

7(b) Waterwall Tubes

Hydro Test, psi.	Diameter, in.	Thickness, in.	Material Spec. No.

FORM P-4 (Back)

8. (a) Economizer Headers			Heads or Ends			8b) Economizer Tubes			
Size and Shape	Material Spec No.	Thickness, in.	Shape	Thickness, in.	Material Spec. No.	Hydro Test, psi.	Diameter, in.	Thickness, in.	Material Spec. No.

9. (a) Superheater Headers							9(b) Superheater Tubes			

10. (a) Other Parts (1) _____ (2) _____ (3) _____							10(b) Tubes for Other Parts			
1										
2										
3										

11. Openings (1) Steam _____ (2) Safety Valve _____
(No., size, and type of nozzles or outlets) (No., size, and type of nozzles or outlets)

(3) Blowoff _____ (4) Feed _____
(No., size, and type of nozzles or outlets) (No., size, type and location of connections)

12.		Maximum Allowable Working Pressure	Code Par. and/or Formula on Which MAWP is Based	Shop Hydro. Test, psi	Heating Surface Sq. Ft.
a	Boiler				
b	Waterwall				
c	Economizer				
d	Superheater				
	Other Parts	250 psi	PG 27.2.2		

Heating surface to be stamped on drum heads

This heating surface not to be used for determining minimum safety valve capacity

13. Field Hydro. Test psi

14. Remarks: FOR INFORMATION ONLY:

The weld procedure used on this item has also been qualified in a post weld heat treated condition.
JM2391
Certified to material & workmanship only.
.831" min. wall

CERTIFICATE OF SHOP COMPLIANCE

We certify the statements made in this Manufacturer's Partial Data Report to be correct and that all details of material, construction, and workmanship of this boiler part conform to Section I of the ASME BOILER AND PRESSURE VESSEL CODE.

Certificate of Authorization No. 14,120 to use the (PP) or (S) S Symbol expires July 19, 19 95

Date 1-26-95 Signed Robert J. Betts Name LaBarge Pipe & Steel Company
(Authorized Representative) (Manufacturer)

CERTIFICATE OF SHOP INSPECTION

I, the undersigned, holding a valid commission issued by The National Board of Boiler and Pressure Vessel Inspectors and the state or province of OK and employed by Delta Lloyds Insurance Company Houston, TX. have inspected the part of a boiler described in this Manufacturer's Partial Data Report on 1-26 19 95, and state that to the best of my knowledge and belief, the manufacturer has constructed this part in accordance with the applicable sections of the ASME BOILER AND PRESSURE VESSEL CODE.

By signing this certificate neither the inspector nor his employer makes any warranty, expressed or implied, concerning the part described in this Manufacturer's Partial Data Report. Furthermore, neither the inspector nor his employer shall be liable in any manner for any personal injury or property damage or a loss of any kind arising from or connected with this inspection.

Date 1-26-95

Signed Mark C. Dewer Commissions OK# 697
(Authorized Inspector) (Nat'l Board (incl. endorsements) State, Province, and No.)

FORM P-4 MANUFACTURER'S PARTIAL DATA REPORT
As Required by the Provisions of the ASME Code Rules, Section I

1 factured by LaBarge Pipe & Steel Company 1300 N. LaBarge Ave. Wagoner, OK. 74467 P-4 ID No. _____
(Name and address of manufacturer)

2. Manufactured for National Dynamics Corp. 6940 Cornhusker Hwy. Lincoln, NE. 68507
(Name and address of purchaser)

3. Identification of Part(s)

Name of Part	Quantity	Line No.	Mfr's Identifying Numbers	Manufacturer's Drawing No.	CRN	National Board No.	Year Built
DRUMS	1	1	K655-01-2	K655			1995

4. The chemical and physical properties of all parts meet the requirements of material specifications of the ASME BOILER AND PRESSURE VESSEL CODE. The construction and workmanship conform to ASME Rules, Section I of ASME Boiler and Pressure Vessel Code.

1992 Addenda to 1993, and Code Cases N/A.
(Year) (Date) (Numbers)

5. (a) Drums:

No.	Inside Diameter, in.	Inside Length ft.	Inside Length in.	Shell Plates: Matl. Spec. No., Grade	Shell Plates: Thickness, in.	Shell Plates: Inside Radius, in.	Tubesheets: Thickness in.	Tubesheets: Inside Radius, in.	Tube Hole Ligament Efficiency, %: Longitudinal	Tube Hole Ligament Efficiency, %: Circumferential
1	36"	15'	8"	SA516 Gr 70	.875"	18"				
2										
3										
4										

	Longitudinal Joints: No. & Type*	Longitudinal Joints: Effi-ciency	Circum. Joints: No. & Type	Circum. Joints: Effi-ciency	Heads: Matl. Spec. No., Grade	Heads: Thickness, in.		Heads: Type**	Heads: Radius of Dish	Heads: Manholes No. Size	Hydro-static Test, psi.
1	2(2)	100	1(2)	100							
2											
3											
4											

*Indicate if (1) Seamless; (2) Fusion welded.

**Indicate if (1) Flat; (2) Dished; (3) Ellipsoidal; (4) Hemispherical

(b) Boiler tubes:

Diameter	Thickness	Matl. Spec. No., Grade

6. (c) Headers no. _____
(Box or sinuous or round, Matl. spec. no.; Thickness)
Heads or Ends _____ Hydro. Test, psi _____
(Shape; Matl. spec no. Thickness)

6 (d) Staybolts _____
(Matl .spec. no.; Diameter; Size telltale; Net area)
Pitch _____ In.Net Area _____ in.^{2} MAWP _____ psi
(Hor. and Vert.) (Supported by one bolt)

(e) Mud Drum: _____ Heads or Ends _____ Hydro. Test, psi _____
(for sect. header boilers, State size; Shape; Matl. spec. no.; Thickness) (Shape; Matl. spec. no.; Thickness)

(a) Waterwall Headers:

No.	Size and Shape	Material Spec No.	Thickness, in.	Heads or Ends: Shape	Heads or Ends: Thickness, in.	Heads or Ends: Material Spec. No.

7(b) Waterwall Tubes

Hydro Test, psi.	Diameter, in.	Thickness, in.	Material Spec. No.

FORM P-4 (Back)

(a) Economizer Headers				Heads or Ends			8b) Economizer Tubes			
No.	Size and Shape	Material Spec No.	Thickness, in.	Shape	Thickness, in.	Material Spec. No.	Hydro Test, psi.	Diameter, in.	Thickness, in.	Material Spec. No.

(a) Superheater Headers							9(b) Superheater Tubes			

10. (a) Other Parts (1) _____ (2) _____ (3) _____ 10(b) Tubes for Other Parts

1										
2										
3										

11. Openings (1) Steam _____ (2) Safety Valve _____
(No., size, and type of nozzles or outlets) (No., size, and type of nozzles or outlets)

(3) Blowoff _____ (4) Feed _____
(No., size, and type of nozzles or outlets) (No., size, type and location of connections)

12.

		Maximum Allowable Working Pressure	Code Par. and/or Formula on Which MAWP is Based	Shop Hydro. Test, psi	Heating Surface Sq. Ft.
a	Boiler				
b	Waterwall				
c	Economizer				
d	Superheater				
e	Other Parts	250 psi	PG 27.2.2		

{ Heating surface to be stamped on drum heads
{ This heating surface not to be used for determining minimum safety valve capacity

13. Field Hydro. Test psi

Remarks: FOR INFORMATION ONLY:

The weld procedure used on this item has also been qualified in a post weld heat treated condition.

Certified to material & workmanship only.
.563 min. wall

CERTIFICATE OF SHOP COMPLIANCE

We certify the statements made in this Manufacturer's Partial Data Report to be correct and that all details of material, construction, and workmanship of this boiler part conform to Section I of the ASME BOILER AND PRESSURE VESSEL CODE.

Certificate of Authorization No. 14,120 to use the (PP) or (S) S Symbol expires July 19, 19 95

Date 12-20-94 Signed Robert J. Betts (Authorized Representative) Name LaBarge Pipe & Steel Company (Manufacturer)

CERTIFICATE OF SHOP INSPECTION

I, the undersigned, holding a valid commission issued by The National Board of Boiler and Pressure Vessel Inspectors and the state or province of OK and employed by Delta Lloyds Insurance Company Houston, Tx. have inspected the part of a boiler described in this Manufacturer's Partial Data Report on 12-20 19 94, and state that to the best of my knowledge and belief, the manufacturer has constructed this part in accordance with the applicable sections of the ASME BOILER AND PRESSURE VESSEL CODE.

By signing this certificate neither the inspector nor his employer makes any warranty, expressed or implied, concerning the part described in this Manufacturer's Partial Data Report. Furthermore, neither the inspector nor his employer shall be liable in any manner for any personal injury or property damage or a loss of any kind arising from or connected with this inspection.

Date 12-20-94

Signed Dan Wagester (Authorized Inspector) Commissions OK # 684 (Nat'l Board (incl. endorsements) State, Province, and No.)

FORM P-6 MANUFACTURERS' DATA REPORT SUPPLEMENTARY SHEET
as required by the provisions of the ASME Code rules

Manufacturer (or engineering-contractor) National Dynamics Corp., 6940 Cornhusker Highway, Lincoln, Nebraska 68507
(name and address)

2. Purchaser American Combustion, Inc., Brentwood, MD
(name and address)

3. Type of boiler Watertube Boiler

4. Boiler no. D-3301 (mfrs. serial no.) | (state or prov.) | (CRN) | 94D5603 (drawing no.) | 3181 (Nat'l. Bd. no.) | 1995 (year built)

Data Items by Line No.	
6(a)2	Water Drum LaBarge Pipe and Steel Company K639-01-13 used 10'0" K639-01-14 used 6'8" Total length of drum 16'8". 100% Radiography
6(a)3	Steam Drum Added 1'0" SA516-70 - Length of Drum 16'8". 100 Radiography

Date 11-6-95 Name National Dynamics Corp. Signed Bob Kirkpatrick

Date 11-6-95 Signed Frank Hamtak (Authorized Inspector) Commissions NAT'L BD 11474 A Nebraska
(Nat'l. Bd. (incl. endorsements) state, prov. and no.)

This form may be obtained from The National Board of Boiler and Pressure Vessel Inspectors, 1055 Crupper Ave., Col's, OH 43229 NB-73 Rev. 2